

REMARKS

Claims 9, 10 and 15-20 stand rejected under 35 U.S.C. § 102 as being anticipated by JP '834, and claims 1-8 and 14 stand rejected under 35 U.S.C. § 103 as being unpatentable over JP '834. Claims 1, 8 and 9 are independent. These rejections are respectfully traversed for the following reasons.

With respect to the independent claims, the Examiner alleges that because "heavy metal includes lead ... its presence *or* absence ... is recorded during recycling" (emphasis added). By this assertion, it appears the Examiner has misinterpreted the pending claims and/or Applicants' previous arguments. For example, claim 9 recites in pertinent part, "lead identification information indicating *presence of lead in said article when said article contains lead* ..." (emphasis added). As such, the present invention requires the identification information to positively indicate a presence of lead as well as an absence thereof.

Turning to JP '834, although a "0" magnitude may indicate the absence of lead, a magnitude greater than "0" does NOT necessitate a presence of lead as required by the present invention. This is because the alleged identification information of JP '834 is directed to heavy metal content *collectively* rather than lead *specifically*. Accordingly, the alleged identification information of JP '834 having a magnitude greater than "0" may only be indicating the presence of heavy metals *other than lead* such as Sn, Bi, Au, Ag, etc..

It is emphasized that "inherency may not be established by probabilities or possibilities" as set forth in *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999). In this regard, the possibility or even the probability that a magnitude of greater than "0" of the

alleged identification information of JP '834 may indicate the presence of lead is NOT sufficient for establishing inherency under § 102.

Regarding claim 16, it appears the Examiner has not considered nor responded to Applicants' previously filed arguments. The Examiner is directed to MPEP § 707.07(f) under the heading "Answer All Material Traversed" which sets forth the applicable requirement (i.e., "[w]here the applicant traverses any rejection, the examiner should, if he or she repeats the rejection, take note of the applicant's argument and answer the substance of it"). It is respectfully requested that the Examiner respond to Applicants' previously filed arguments with respect to claim 16, which are reprinted below for the Examiner's convenience.

For example, regarding claim 16, the Examiner alleges that Asao "teaches that the lead containing *article* is recycled ..." (emphasis added). However, as set forth in the previous response, Asao expressly discloses separating the metal components from the alleged article ("printed circuit board") so as to recycle only the unattached components having heavy metal content *without the circuit board*, thereby requiring mass redesign of the circuit boards which increases complexity and cost. In fact, Asao is concerned only with recycling components having heavy metal content collectively without differentiation to lead, and moreover desires recycling of *individual* components rather than the packaged circuit board *as a whole* (i.e., Asao recycles by first separating the components from the circuit board so as to recycle the components only, and is based on the *total* heavy metal content). On the other hand, the present invention can provide a simple, efficient process which can recycle, for example, the circuit board together with the parts attached thereto by reference to the indication information regarding lead content. In short, Asao does not recycle the circuit board as a whole with parts

attached thereto, let alone based on lead content. Instead, Asao recycles only metal components which are *detached* from the board, and based on total heavy metal content.

It would be ideal to recycle *all* heavy metals as well as *separating* such heavy metals from the circuit board as disclosed by Asao; but in order to do so, the structure of the circuit board would have to be changed thereby leading to technical complexity resulting in increased cost and decreased efficiency. Only Applicants have conceived and enabled a process by which the article as a whole is recycled while a lead-free article as a whole can be disposed, and based specifically on the lead content.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that Asao does not anticipate claims 1, 8, 9, 11 and 12, nor any claim dependent thereon.

Moreover, as previously mentioned, it is respectfully submitted that the present invention provides new and unexpected results whereby benefits and advantages over the prior art are obtained. Only Applicants considered the unique problems related to Pb and differentiated Pb from other heavy metals, and conceived and enabled the means by which to overcome those problems. Indeed, only Applicants have considered such issues as Pb being more harmful than other heavy metals, and Pb being generally contained in a general solder material. As previously mentioned Pb is not only a kind of heavy metal, but Applicants have identified the removal of Pb as being very preferable relative to other heavy metals. Furthermore, only Applicants have identified that it is easy to use a Pb-free solder

with the indication thereof, but it is very difficult to indicate the content of each heavy metal because the content is varied substrate by substrate.

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

The Examiner is respectfully requested to reconsider the withdrawal of claims 11-13 in view of the amendments thereto, which are submitted to place claims 11-13 in condition for allowance for at least reasons similar to those discussed above with respect to claim 9.

CONCLUSION

Having fully and completely responded to the Office Action, Applicants submit that all of the claims are now in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

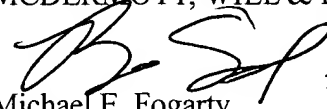
To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this

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paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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